MMCC
MARYLAND MEDICAL CANNABIS COMMISSION

LABORATORY TESTING & MEDICAL CANNABIS PRODUCTS

About The Maryland Medical Cannabis Commission

The mission of the Maryland Medical Cannabis Commission (MMCC) is to provide a safe, effective, and consumer-friendly medical cannabis program for qualifying patients.

Independent Testing Laboratories

Independent Testing Laboratories are issued a provisional registration by the MMCC, during which time they may test products. Provisional registrations are good for one year. Labs must fulfill International Organization for Standardization or ISO-17025 certification within that year. (ISO-17025 is the standard for testing and calibration that most countries, including the United States, use to accredit laboratories) The MMCC monitors labs to ensure they are on track to achieve their ISO-17025 certification during the provisional registration period. Once accredited, Independent Testing Laboratories must maintain their ISO-17025 accreditation in order to continue testing cannabis products.

Medical Cannabis Testing Panel:

1. **Water Activity and Moisture Content**

   Measures how susceptible the product is to microbial contamination, such as yeast and mold. The higher the water activity, the more vulnerable the cannabis product is to microorganism growth.

2. **Potency Analysis**

   Understanding cannabinoid profiles and potency helps patients determine appropriate dosing. There are more than 100 cannabinoids identified in the cannabis plant.

COMMON CANNABINOIDS IN CANNABIS:

- **CBGA – Cannabigerolic Acid**
- **CBN – Cannabinol**
- **CBG – Cannabigerol**
- **CBDA – Cannabidiolic Acid**
- **THCA – Tetrahydrocannabinolic Acid**
- **CBD – Cannabidiol**
- **Δ9-THC – Delta 9-Tetrahydrocannabinol**
- **Δ8-THC – Delta 8-Tetrahydrocannabinol**
- **CBC – Cannabichromene**
- **THCV – Tetrahydrocannabivarin**
- **CBNA – Cannabinolic Acid**

3. **Terpene Analysis**

   Terpenes are responsible for a plant's fragrance. Like cannabinoids, there are many different terpenes.

COMMON TERPENES IN CANNABIS:

- **Linalool**
- **Citronellol**
- **Caryophyllene Oxide**
- **Myrcene**
- **Beta Carophyllene**
- **Terpinolene**
- **Limonene**
- **Alpha Pinene**
- **Alpha Humulene**
- **Phytol**

4. **Foreign Matter Inspection**

   High-powered microscopes are used to analyze cannabis products for any foreign material or contaminants. Cannabis must be free of foreign contaminants such as sand, hair and bugs.

5. **Microbial Screen**

   Microbes are molds and bacteria that pose a high risk to patients (especially to those with suppressed immune systems).

6. **Mycotoxin Screen**

   Mycotoxins are toxic by-products of molds and fungi.

7. **Heavy Metal Screen**

   Heavy metals are toxic, as the body is unable to remove these metals efficiently after exposure. MMCC-registered labs test for lead, arsenic, mercury, cadmium, chromium, barium, silver, and selenium.

8. **Residual Solvent Test**

   Residual solvents are the byproducts of extraction processes used to make processed products (concentrates, vapes, etc.) These impurities, such as acetone, ethanol, butane, benzene and propane can sometimes be toxic.

9. **Pesticide Residue Analysis**

   Pesticides are common in most agricultural settings, including cannabis. Testing for these residues help protect patients from consuming hazardous chemicals.

Medical cannabis products are required to pass all laboratory testing prior to sale.

Products that fail laboratory tests must be remediated, quarantined or destroyed.

For more information, visit mmcc.maryland.gov